and Mr. Woodforde started for Chambers's Creek with four of our horses. And on their arrival they will at once commence preparing the food necessary for the party; and we expect that by the time this is done the whole party will be there assembled, and at once make their final start for the Newcastle water.

Yesterday five men, with thirty horses, took their departure, who will travel by easy stages to the north till they are joined by Mr. Stuart and Mr. Waterhouse (the naturalist). The entire strength of the party will be eleven men, with seventy horses. They are fitted out most liberally with every necessary. They carry with them water-bottles that will hold 70 gallons, and by this means Mr. Stuart will be able to form depôts ahead; and we now entertain no doubt of his making his way through the last 80 miles which he has yet to accomplish.

The Papers read were—

1. *Expedition to Kilimanjaro (in company with the Baron von der Decken).* By R. THORNTON, F.R.G.S., late Geologist to the Zambesi Expedition.

THE letter from which the following extracts are made contains the only information that has yet reached the Society on the successful issue of their journey. The extracts contain all that is purely geographical in the letter, but there are in addition minute notes on the geology of the district visited.

"Our route lay from Mombas to the south-west over the Shimba, thence north-west to the Kadiaro, then south-west to the Pare, then north to the Lake Yipe, thence through Dafeta to Kilema, where we made one attempt to ascend the Kilimanjaro, but had to turn back at about 8000 feet. We then went round by the foot of the mountain to Madjami; thence we returned by Dafeta, Lake Yipe, Pare, and the north foot of Usambara, to Wanga on the coast, which we reached on the 101st day from Mombas. We have made a tolerable map of our journey, the country through which we passed being very favourable for triangulation; though, from not being allowed to ascend the mountains of Pare and Usambara, and the want of two or three stations which circumstances prevented our taking, the map is not nearly so complete as I could wish it to be. The triangulation is checked by several latitudes and a lunar distance at Kilema. I have not yet plotted out the whole of the map, but I hope to complete and send it shortly.

"Our journey, on the whole, has been tolerably successful. We did not succeed in reaching the top of Kilimanjaro; but I have its altitude from six different stations, connected by tolerable triangles, at

distances varying from 15 to 50 miles. From these I believe the height of the Kilimanjaro to be about 20,000 feet. Its shape varies much, as seen from different points of view; but, from all places we have seen it, its base rises very gradually from a great plane. The outline of the top, as seen from Madjami, is a great dome (but this face is nearly flat): as seen from the east, it is conical, with the apex cut off, forming a little plane, sloping a little to the north. The southern slope of this cone is much steeper than the northern. Several miles to the north-east of the top a great conical peak rises to about 17,000 feet; and about 50 miles to the west of Kilimanjaro a great conical mountain, named Meru, rises from the great plain of the Massai to perhaps 18,000 feet.

"As seen from the east, the snow forms only a thick cap to the Kilimanjaro, with a broad tongue creeping down the south slope; and, when the sun is high, several long streaks of snow are seen lying in small ravines descending from the cap. As seen from Madjami, the snow partially covers the south-west face of the dome (about a quarter the height of the mountain), but several large bare patches of rock show out above the snow. The snow here seems to lie at its steepest possible angle, so that fresh snow falling on this side must at once slip down to the foot of the face of the dome. In one evening, at Madjami, we saw three such slips of snow in about an hour's time. On the eastern peak a few patches of snow are seen when the sun is high.

"All parts of the mountain we saw are composed of lava of subariel origin. From not reaching the top, and having seen only the south-east, south, and south-west parts of the mountain, I cannot speak with certainty of its structure; but I think that the Kilimanjaro is the north-eastern part of an old subariel volcano, the south-western and larger part having sunk down several thousand feet, and been partially broken up by faults. The great fault separating these two parts lies about north-west and south-east, and forms a very steep, long, flat south-west face to the mountain; and a high, very rugged mountain mass, lying a few miles to the north of Madjami, may be the relics of the top of the original mountain.

"We have not reached the axis of structure of Eastern Africa; but very far to the south-west from Kilema are seen, on a clear day, three very high rugged mountains (as high as the Meru mountain), with conical tops, which, if not volcanic—and I think their sides are too steep and shapes too irregular for ordinary volcanoes—may be composed of the axial granite.

The Lake Ype is shallow, and rapidly filling up. You will see its size and position best when I send you our map. On its north side

it receives the River Loomi (of Rebmann), and at its west end sends out a river which, after joining the Jagga river, flows south through the plain lying between the Ugono and Anuisha ranges to the river of Pangani. Between the Kilimanjaro and Anusha ranges is a small watershed, which sends the rivers of Western Madjami to the west.

"Mr. Rebmann's map and description, as given in the first volume of the 'Missionary Intelligencer,' give a very fair idea of the country, and, considering he had no instruments, his map is very accurate."

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2. *Ascent of the Ogun, or Abbeokuta River.* By Captain RICHARD BURTON, F.R.G.S., H. M. Consul at Fernando Po, with Captain BEDINGFIELD, R.N., F.R.G.S., and Dr. EALES, R.N.

CAPTAIN BURTON'S characteristic letter will be found printed at length at p. 64. It is therefore unnecessary to do more here than shortly allude to it. He visited Abbeokuta; and his remarks show that, while impressed with the cotton-producing powers of the soil, he takes a less favourable view than is usual, of the civilized progress to which the inhabitants have actually attained. He points out that the new colony of Lagos is deficient in a sanatorium, which should be sought in the mountainous country of the Cameroons. A minute survey of the River Ogun, by himself and Captain Bedingfield, accompanies the letter.

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3. *Journal of the Proceedings of H. M. S. 'Bloodhound' up the River Volta, West Coast of Africa, under* Commander DOLBEN, R.N., F.R.G.S.

THE author, conveying his Excellency the Governor of Cape Coast Castle, steamed to the mouth of the Volta, a river near Lagos, with a view of ascending it,—a feat that had never before been accomplished by white men. A rapid survey of the bar proved it was not that impassable barrier it had always been reputed, and that its features had become exceedingly different from those described in the sailing directory. An expedition of four well-armed boats, manned by thirty-nine men, then proceeded to enter the river. They crossed the bar without difficulty on October 28th, 1861, in 11 feet water. The *Bloodhound* herself could have been taken across it.

Partly sailing and partly rowing, the expedition ascended the river for 120 miles without difficulty or molestation, when their voyage was brought to an abrupt close by rapids. Though impracticable to ship's boats, the rapids are not absolutely impassable, for the small strong native canoes can be forced through them to